

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: LYNN P. NELLES ET AL. )  
 ) Group Art No.:  
Serial No: 09/993,048 ) 1761  
 )  
Filed: November 13, 2001 ) Before the Examiner:  
 ) Leslie A Wong  
For: TREATMENT OF VEGETABLE )  
OILS OR ANIMAL FATS WITH )  
SULFUR OR NITROGEN DONOR )  
COMPOUNDS FOR ANIMAL )  
FOOD FLAVORINGS )

Assistant Commissioner for Patents  
BOX AF  
Washington, D.C. 20231

**DECLARATION UNDER 37 CFR 1.131**

Nayankumar B. Trivedi declares and says that:

1. I am an inventor of the invention claimed in the above-identified patent application.
2. We conceived in the United States the invention disclosed and claimed in the above-identified patent application prior to October 12, 2001, and then worked on diligently reducing the invention to practice in the United States prior to October 12, 2001, and further diligently reduced the invention to practice in the United States by filing the above-identified patent application on November 13, 2001.
3. As evidence in support of this prior conception and reduction to practice, submitted herewith is the following evidence of activity done in the United States.
  - (a) Exhibit A is a copy of notebook pages, with the dates redacted, prepared by Lynne P. Nelles prior to October 12, 2001, including notes which show conception and reduction to practice of the invention. Exhibit

A clearly shows a palatability enhancer for animal food comprising a cooked product created by a method comprising the steps of:

(a) creating a liquefied mixture comprising triglyceride molecules derived from at least one plant or animal source, mixed with at least one donor which functions as a donor of elements selected from the group consisting of sulfur, nitrogen, and a combination of sulfur and nitrogen; and,

(b) cooking the liquefied mixture under a suitable combination of temperature, pressure, and time conditions to cause: (i) breakage of a substantial quantity of the triglyceride molecules, thereby creating smaller molecular fragments; and (ii) chemical bonding of sulfur or nitrogen atoms to the smaller molecular fragments, in quantities sufficient to form a cooked product for use as a palatability enhancer for at least one type of animal food preparation; wherein cooking is performed at ambient pressure and a temperature of about 90°C to about 98°C, or cooking is performed at a pressure of greater than 10 pounds per square inch and a temperature of about 110°C to about 200°C.

Exhibit A shows a liquefied mixture comprising triglyceride molecules derived from at least one plant or animal source, mixed with at least one donor which functions as a donor of elements selected from the group consisting of sulfur, nitrogen, and a combination of sulfur and nitrogen. In particular, at page 57, Exhibit A pages 1 and 2 show the generation of composition XRH12357 (SF-HTR) comprising a poultry fat mixture + Fas (e.g., triglyceride molecules derived from animal source), water, NaOH, NaS (sulfur source), NH<sub>4</sub>OH (nitrogen source), Tween 80, and Tocopherols. Reaction was in a Parr vessel at 140°C.

(b) Exhibit B is a copy of notebook pages, with the dates redacted, prepared by Mathias Sucan prior to October 12, 2001, including notes which show conception and reduction to practice of the invention.

Page 1 of Exhibit B shows a reaction of saponified fat with sodium sulfide at 200°C. Page 2 of Exhibit B shows a reaction of chicken fat with sodium sulfide at 200°C. Page 3 shows a reaction of chicken fat with sodium hydroxide, and sodium sulfide at 200°C. Page 4 shows a reaction of chicken fat, sodium sulfide, and arginine at 200°C. All formulations are noted as being better than chicken liver digest.

(c) With respect to diligently reducing the invention to practice, the invention was discussed with attorney Patrick D. Kelly at least twice. His notes from a first meeting are included as Exhibit C and were taken prior to October 12, 2001. Page 1 clearly indicates a reaction of fats (plant or animal), sodium sulfide, and ammonia at 150°C under 50 psig pressure, or at 98°C under no pressure. (Exhibit C, page 1) Addition of the flavor produced to liver, viscera (i.e., hydrolyzed animal digests) is also described. (Exhibit C, page 1) Page 2 includes a more detailed description of fats including saponification.

(d) With respect to diligently reducing the invention to practice, Exhibit D shows additional notes taken upon a second meeting with Patrick D. Kelly to further discuss the invention and refine the patent application prior to October 12, 2001. On page 1, a “liquefied animal fat or vegetable oil preparation for pet foods” is described. Sulfur-containing compounds such as sulfide salts, cysteine, peptides, elemental sulfur, and sulfide liquor are added to a “fatty carrier”. (Exhibit D, page 1) On page 2 of Exhibit D, nitrogen-donating compounds are listed as microorganisms, amino acids, urea, nucleotides, guanidine groups, and heterocyclics. Reaction conditions are described as low heat, that is below 98°C, or a temperature of 110 to 200°C under a pressure of, for example, 10 psig. (Exhibit D, page 3) Pages 4 and 5 of Exhibit D includes further explanation of reaction conditions. Page 5 show that the goal of reaction was to achieve “smaller pieces/chunks” from the fats with “N and/or S attached to small pieces”. (Exhibit D, page 5) Also, the discussion of

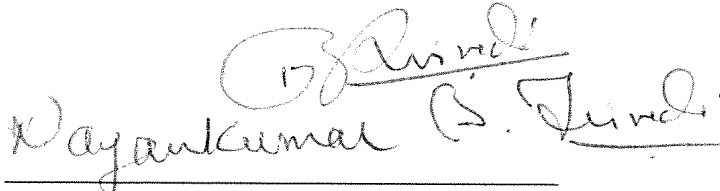
glycogen, muscle and livers refers to the animal digest component of the flavor compositions. (Exhibit D, page 4)

(e) It is further my understanding that Patrick D. Kelly exercised reasonable diligence in preparing a draft of the application. It is further my understanding that after receiving the request to prepare the application, Patrick D Kelly prepared and then sent a draft of the application for inventor review. I and the other inventors reviewed and approved the application prior to filing with the US PTO on November 13, 2001.

(f) It is further my understanding that Patrick D Kelly filed the application on November 13, 2001, thus constructively reducing the invention to practice.

4. The undersigned declares that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 101 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

Date: Dec 14, 06

  
Nayankumar B. Trivedi

Nayankumar B. Trivedi